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EXAMINER

MAZUMDAR, SONYA

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Please find below and/or attached an Office communication concerning this application or proceeding.

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/715,752
Filing Date: November 18, 2003
Appellant(s): BRANCA ET AL.

John G. Powell
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed May 29, 2007 appealing from the Office action mailed January 3, 2007.

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(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

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(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,569,348	HEFELE	10-1996
3,574,153	SIROTA	4-1971
6,475,283	KOEHN	11-2002
4,906,335	GOODNOW, et al.	3-1990
EP 0978263	LENDER, et al.	9-2000
4,343,260	YAJIMA, et al.	8-1982
3,762,365	HERZOG	10-1973
4,141,343	HEFELE	2-1979
5,064,492	FRIESCH	11-1991
2003/0138570	KAYLOR, et al.	7-2003
5,695,376	DATTA, et al.	12-1997

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating

obviousness or nonobviousness.

Claim 2 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hefe (US 5,569,348).

Hefe teaches a method of coating an adhesive onto fabric. The adhesive is extruded onto a surface of a roller, i.e. first tool (12), in the form of a multitude of beads by means of a coater unit (28) that has a multitude of extruder-applicators, in the form of surface cavities, and a hot melt doctor blade (32) to assist the gravure printing process. The coater unit is positioned above the surface of the roller (12) and heated to 140 °C. (abstract; column 6, lines 26-48; column 7, lines 4-13; column 9, lines 20-29; Figure 3). The adhesive is transferred to a final carrier (18) supported by two rollers (column 6, lines 50-53).

Although it is not expressly taught by Hefele to apply an adhesive coating from a coater unit between 70°C and 250 °C, it is inherent that the adhesive coating will be applied in this range if the coater unit is heated to 140°C. However, if it is not inherent, it would have been obvious for one having ordinary skill in the art to do so to have an adhesive of appropriate temperature, flow, and adhesive characteristics for coating a porous, fibrous web. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990) (see MPEP 2144.05)

Claim Rejections - 35 USC § 103

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sirota (US 3,574,153) in view of Koehn (US 6,475,283) and Goodnow et al. (US 4,906,335)

Sirota teaches a process of applying hot melt adhesive compositions onto flexible web substrates. A pot, i.e. coater unit (10), dispenses adhesive (11) over a roller (12) and the adhesive application is controlled by a doctor blade (13) and applied to the substrate which is pulled over a pressure roller (15) (abstract; column 5, line 16 and lines 44-48). The adhesive is applied at temperature in the range of 250 °F-400 °F, or 121 °C-204 °C (column 5, lines 24-25).

Sirota does not teach applying adhesive as a multitude of beads with a coater unit having a multitude of applicators. Koehn teaches applying a patterned (block) adhesive by means of nozzles (6) supported on a bar (5) (column 1, lines 25-31; column 3, lines 37-38; Figures 1 and 2).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to perform coating as Koehn taught and would have been motivated to do so the adhesive can refrain from leakage and thus, no time consuming cleaning procedure is necessary after applications.

Furthermore, Sirota does not teach positioning a doctor blade at a certain angle tangent to the surface of a roller. Goodnow et al. teach optimizing the angle of a doctor blade against a rotating surface (column 1, lines 20-34).

Although Goodnow et al. do not specify a certain angle of the doctor blade tangent to the surface of a roller, the positioning of the doctor blade is taught so material is applied evenly and no damage or overflow can potentially occur. Therefore, it would have been obvious for one having ordinary skill in the art at the time the invention was made to use the teaching of Goodnow et al. to position a doctor blade accurately.

Claims 1, 3, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lender et al. (EP 0978263) in view of Koehn (US 6,475,283) and Goodnow et al. (US 4,906,335)

Lender et al. teach a process of applying hot melt adhesive compositions onto articles. A coater unit (36) dispenses adhesive on an engraved roller (31) and the adhesive application is controlled by a doctor blade (35), applied to the article (11) applied at an average temperature 110 °C and is pulled around a roller (14) (abstract; column 9, lines 17-18; column 10, lines 45-58; column 11, lines 7-12; Figures 1 and 3).

Lender et al. do not teach applying adhesive as a multitude of beads with a coater unit having a multitude of applicators. Koehn teaches applying a patterned (block)

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adhesive by means of nozzles (6) supported on a bar (5) (column 1, lines 25-31; column 3, lines 37-38; Figures 1 and 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to perform coating as Koehn taught and would have been motivated to do so the adhesive can refrain from leakage and thus, no time consuming cleaning procedure is necessary after applications.

Furthermore, Lender et al. does not teach positioning a doctor blade at a certain angle tangent to the surface of a roller. Goodnow et al. teach optimizing the angle of a doctor blade against a rotating surface (column 1, lines 20-34).

Although Goodnow et al. do not specify a certain angle of the doctor blade tangent to the surface of a roller, the positioning of the doctor blade is taught so material is applied evenly and no damage or overflow can potentially occur. Therefore, it would have been obvious for one having ordinary skill in the art at the time the invention was made to use the teaching of Goodnow et al. to position a doctor blade accurately.

Claims 1, 3, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yajima et al. in view of Herzog (US 3,762,365) and Hefele (US 4,141,313).

With respect to claim 1, Yajima et al. teach the patterned dot deposition of a liquid adhesive onto the outer surface of an article by means of a stamp roller provided with a pattern of depression pits where the adhesive is deposited. The surface of the first roller is contacted with a blade tangential to the surface of the roller and lies with its end firmly against the surface of the roller. The adhesive is drawn off the stamp roller and is directly applied through contact with the surface of a cloth on a pressure

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take-off roller. (abstract; column 1, lines 7-13 and line 19; column 2, lines 35-38; Figures 1 and 3)

Yajima et al. do not teach heating a coater unit placed around the engraved roller to a specified temperature. Herzog teaches maintaining a temperature of a coating substance in a melted condition between 60°C to 180 °C using heating elements around a coating unit (column 4, lines 9-12, lines 36-39, and lines 64-67).

It would have been obvious for Yajima et al. to maintain the coating unit at a specific temperature Herzog had taught because one would have been motivated to have an adhesive of appropriate temperature, flow, and adhesive characteristics for coating a porous, fibrous web. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990) (see MPEP 2144.05)

Also, Yajima et al. in view of Herzog do not teach a multitude of applicators and an angle of the scraper blade. Hefele teaches a method using two adhesive suppliers placed around the engraved roller. Also, the surface of the first roller is contacted with a blade with an angle of 40 degrees with the tangent of the surface of the roller and lies with its end firmly against its' surface (column 5, lines 37-40, 51-52; column 8, lines 35-38).

It would have been obvious to Yajima et al. in view of Herzog to use a multitude of applicators as well as a blade with a specified angle from the surface. One would have been motivated to do so because a multitude of applicators would provide a fuller

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adhesive pattern coating on the surface and the amount of adhesive shown in the pattern is dependent on the angle of the blade.

With respect to claim 3, Yajima et al. teach the use of a patterned stamp roller rotating in a counter-clockwise direction (Figure 1), but does not teach rotating the pressure take-off roller. However, it would have been obvious for Yajima et al. to rotate the pressure take-off roller in a clockwise direction for the cloth to be carried continuously along with the rotation of the patterned stamp roller, pinched between the peripheral surfaces of the pressure take-off roller and the stamp roller and making its exit after going through the rollers. (column 1, lines 49-55; column 3, lines 18-26)

With respect to claim 11, Yajima et al. teach the use of the engraved roller having depressions where the adhesive is inserted (column 1, lines 40-44; Figure 1).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yajima et al. in view of Herzog and Hefele as applied to claim 3, and further in view of Lender et al. (EP 0978263) and Friesch (US 5064492).

Even though Herzog teaches applying a coating at a heated temperature, Yajima et al. in view of Herzog and Hefele do not teach heating the coater and the engraved roller and cooling the pressure take-off roller. Lender et al. teach to keep the coater and engraving roller at a high temperature (Lender et al. - column 18; lines 25-41) and Friesch teaches the cooling of the adhesive after imprinting on the substrate (Friesch - column 3, lines 52-59).

It would have been obvious for Yajima et al. in view of Herzog and Hefele to heat the coater and engraving roller and cool the pressure take-off roller. One would have

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been motivated to do so because the adhesive should be at a solid or semi-solid plastic state at temperatures at or below the usage temperature of the disposable absorbent product (Lender et al. – column 4, lines 52-56).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yajima et al. in view of Herzog and Hefe (US 4,141,313) as applied to claim 3, and further in view of Hefe (US 5,569,348).

Yajima et al. in view of Herzog and Hefe ('313) do not teach the operation of a pressure take-off roller above 30 degrees Celsius. Hefe ('348) teaches cooling the carrier band coated with adhesive to room temperature, approximately 25 degrees Celsius, over a curved cooled surface. (column 7, lines 43-46)

It would have been obvious for Yajima et al. in view of Herzog and Hefe ('313) to operate the pressure take-off roller at room temperature as Hefe ('348) taught, and would have been motivated to do so because it would not require further energy or expense to maintain the roller at room temperature.

Claims 10, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yajima et al. in view of Herzog and Hefe ('313) as applied to claim 1, and further in view of Kaylor et al. (US 2003/0138570)

The teachings for claim 3 are as described above.

Yajima et al. in view of Herzog, and Hefe do not teach the use of a take-off roller with a specified shore A hardness value. Kaylor et al. teach an impression roller

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supporting the substrate having a preferable Shore A hardness of 70 (paragraph 0051, lines 1-4).

It would have been obvious for Yajima et al. in view of Herzog and Hefele to use a roller having a Shore A hardness of 70 as Kaylor et al. taught, and would have been motivated to do so because Kaylor et al. teach such a roller is known and used in applying active material to a substrate, thus can be used by one of ordinary skill in the art.

Yajima et al. in view of Herzog and Hefele do not teach the use of the engraved roller with specified width and depth of the cavities. Kaylor et al. teach the width of the produced pattern ranging from about 0.1 microns to about 70 microns across (paragraph 0015). The depth of the cavities in the engraved roller used in the examples was specified as 51 microns (paragraph 0075).

It would have been obvious for Yajima et al. in view of Herzog and Hefele to use a roller having the previously specified width and depth of the cavities as Kaylor et al. taught, and would have been motivated to do so because Kaylor et al. teach such specifications of the roller as known and used in applying active material to a substrate, thus can be used by one of ordinary skill in the art. "Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." (MPEP § 2144.05)

Yajima et al. in view of Herzog and Hefele do not teach rotating the article around the pressure take-off roller, which exits at a specified angle. Kaylor et al. teach the contact angle of the active material with respect to the substrate is from about 30 to 70 degrees (paragraph 0016). It can be seen from Figure 1 that the contact angle and its'

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complementary angle, the exit angle of the formed web, are relatively congruent to each other.

It would have been obvious for Yajima et al. in view of Herzog and Hefele to rotate the substrate around the pressure take-off roller, contact the substrate with the adhesive, and have the web exit at a specified angle as Kaylor et al. taught, and would have been motivated to do so because Kaylor et al. teach such a method as known and used in applying a certain amount of active material to a substrate, thus can be used by one of ordinary skill in the art. "Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." (MPEP § 2144.05)

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yajima et al. in view of Herzog and Hefele (US 4,141,313), and Hefele (US 5,569,348) as applied to claim 7, and further in view of Datta et al. (US 5,695,376)

The teachings of claim 7 are as described above.

Yajima et al. in view of Herzog, Hefele ('313) and Hefele ('348) do not teach using articles with a melting temperature of the articles lower than the engraving roller. Datta et al. teach forming personal care articles where the bonding process should keep the adhesive component melted, but below the melting point of the structural component. (column 7, lines 56-60; column 10, lines 10-14)

It would have been obvious for Yajima et al. in view of Herzog, Hefele ('313) and Hefele ('348) to use articles with a melting temperature lower than the engraving roller. One would have been motivated to do so since the roller will effectively soften the web

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and then allow the adhesive to adhere thereto more effective only if the heated roller is kept at a temperature higher than the article temperature.

(10) Response to Arguments

Argument 1:

With respect to the arguments made against the rejection of claim 2 over Hefe (US 5,569,348), surface cavities on an engraved roller (28) taught by Hefe act as a multitude of extruder-applicators in view that adhesive in the surface cavities in the engraved roller is pressed and coated onto a heating roller (12) (Figure 3). It is disclosed in Applicant's specification that it is preferred that active material exits the coater aided by a pressure applied onto the coater (page 10, lines 15-16).

According to Dictionary.com, the definition of "extrude" is to thrust out, force, or press out (<http://dictionary.reference.com/browse/extrude>). During patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." (see MPEP § 2111). Thus, Hefe shows that pressure between the engraved roller and heating roller causes the adhesive to be forced out of the surface cavities, or extruded, and transferred onto the heating roller (Figure 3).

Also, the Examiner does not see a difference in the interpretation of Hefe's "dots" of adhesive and the claimed "multitude of beads".

Therefore, the rejection against claim 2 is maintained.

Argument 2:

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With respect to the argument against the rejection of claim 1 in view of Sirota, Koehn, and Goodnow, it is agreed that Koehn teaches spraying and dispersing a patterned (block) adhesive, through nozzles (6), in the form of small drops or a similar pattern thereto; the adhesive can refrain from leakage and thus, no time consuming cleaning procedure is necessary after applications (column 1, lines 25-31; column 3, lines 37-38; Figures 1 and 2). However, the Examiner does not see a difference in the interpretation of Koehn's "small drops" and the claimed "multitude of beads".

Goodnow et al. teach optimization of a blade angle in contributing to an effective doctoring operation against a rotating surface (column 1, lines 20-34). Furthermore, since a range at which the angle may be set at is disclosed in the claim, Goodnow's teaching allows for flexibility in setting an angle, so material is applied evenly and no damage or overflow can potentially occur.

Therefore, the rejection of claim 1, and claim 3 accordingly, are maintained.

Argument 3:

With respect to the argument against the rejection of claim 1 in view of Lender et al., Koehn, and Goodnow, Lender et al. teach a method of adhesive application (Lender: abstract) and Koehn teaches spraying and dispersing a patterned (block) adhesive, through nozzles (6), in the form of small drops or a similar pattern thereto (Koehn: column 1, lines 25-31 and column 3, lines 37-38).

Appellant states that Lender teaches the undesireability of spraying adhesive onto a roller. However, Lender clearly teaches that any means known in the art to apply adhesive such as slot coating, spraying, and applicator rolls may be used a roller (31), or

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first tool (paragraph 0037; Figure 1). Although slot coating is taught as preferred, such is a clear teaching that spraying may be used.

Appellant states that there is no evidence or reasoning found as to how the spray nozzles enable adhesive to be applied in the form of a multitude of beads, but the Examiner does not see a difference in the interpretation of Koehn's "small drops" and the claimed "multitude of beads".

Goodnow et al. teach optimization of a blade angle in contributing to an effective doctoring operation against a rotating surface (column 1, lines 20-34). Furthermore, since a range at which the angle may be set at is disclosed in the claim, Goodnow's teaching allows for flexibility in setting an angle, so material is applied evenly and no damage or overflow can potentially occur.

Appellant also argues that the specification teaches preferred temperatures for the toll or surface thereof, relative to adhesive leaving the coater, however such is not mentioned in the claims and is thus not distinguishing. Furthermore, Lender et al. clearly teach applying adhesive to a first tool (31) at a minimum temperature 110 °C (paragraphs 0017 and 0018), thus, meeting the claimed temperature limitation for adhesive application.

Therefore, the rejection of claim 1, and claims 3 and 11 accordingly, are maintained.

Argument 4:

In response to applicant's argument against the rejection of claims 1, 3, and 11, that there is no suggestion to combine Yajima et al., Herzog, and Hefe (US 4,141,313),

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the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, Yajima's method teaches the limitations of claim 1 except for a multitude of applicators, an engraved roller at a specified temperature, and an angle of a doctor blade, but the teachings of both Herzog and HefeLe are used to cure those deficiencies. Herzog teaches maintaining a coating unit (2) with heated elements (11, 12) (Herzog: column 4, lines 64-67; Figure 2). Appellant argues that there is no reasoning or motivation to modify Yajima's method with that of HefeLe (US '313) because HefeLe teaches a powdered adhesive. However, the teachings of HefeLe is used to show that a surface of an engraved roller is contacted with blades (15, 16) at an angle of 40 degrees with the tangent of the surface of the roller and lies with its end firmly against the roller's surface, in order to fill adhesive in the roller's cavities (HefeLe: column 5, lines 37-40 and lines 51-52; column 8, lines 35-38; Figure 1). It would be expected that the blades would be useful for filling either a powdered or liquid adhesive in the roller's cavities; Yajima discloses being able to apply an adhesive with a viscosity between 1 cps to about 1,000,000 cps (Yajima: column 2, lines 66-68) and HefeLe teach applying adhesive within that viscosity range, depending on the temperature (column 8, lines 12-13 and lines 22-23).

Therefore, the rejection of claim 1, and claims 3 and 11 accordingly, are maintained.

Argument 5:

The rejection of claim 3 under 35 USC 103(a) over Yajima et al. in view of Herzog and Hefe (‘313) is maintained; therefore the rejection of claim 4, further in view of Lender et al. and Friesch, is also maintained.

Argument 6:

The rejection of claim 3 under 35 USC 103(a) over Yajima et al. in view of Herzog and Hefe (‘313) is maintained; therefore the rejection of claim 7, further in view of Hefe (‘348), is also maintained.

Argument 7:

The rejection of claim 1 under 35 USC 103(a) over Yajima et al. in view of Herzog and Hefe (‘313) is maintained; therefore the rejection of claims 10, 12, and 13, further in view of Kaylor et al., is also maintained.

Argument 8:

The rejection of claim 7 under 35 USC 103(a) over Yajima et al. in view of Herzog, Hefe (‘313), and Hefe (‘348) is maintained; therefore the rejection of claim 14, further in view of Datta et al., is also maintained.

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(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Sonya Mazumdar



Conferees:

Philip Tucker

Romulo Delmendo



